

BEST AVAILABLE COPY

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(MBHB Case No. 00,474; MMID 590)

In the Application of:)	
)	
Denis L. Babin)	Before the Examiner:
)	Hamilton, Isaac N.
Serial No. 09/595,133)	
)	Group Art Unit: 3724
Filed: June 16, 2000)	
)	
For: Method for Fast Manufacturing and Assembling)	
of Hot Runner Systems)	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION PURSUANT TO 37 C.F.R. SECTION 1.132

Dear Sir:

I, Patrick Bennett, residing at 1342 Wiltshire Avenue, Burlington, Ontario,

Canada, hereby declare:

1. I am the Vice President of Sales & Marketing for Mold-Masters Limited ("MML"), the Assignee of the above-captioned patent application.
2. I have worked in the plastics manufacturing industry, specifically for MML in the hot runner systems industry, for 13 years.
3. The fast-manufacturing method for hot runner systems claimed and disclosed in the above-captioned application is commercially known as MML's MIM Speed.
4. Attached hereto as Exhibit A are brochures from the main competitors in

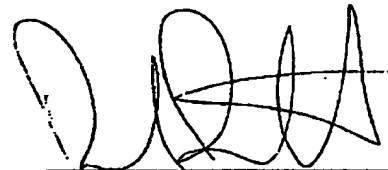
the hot runner systems industry.

5. To the best of my knowledge, none of the main competitors in the hot runner industry, including Husky, Synventive, Incoe, Guenther, YUDO, DME, Ewikon, Thermoplay, HRSFlow, or MML have manufactured or sold any hot runner systems that use separate, multiple parts to form a manifold, such as, for example, the multi-part manifold disclosed by *Benenati* in U.S. Patent No. 5,227,179.

6. As evidenced by the attached brochures, to the best of my knowledge, MML's main competitors in the hot runner systems industry have recognized the commercial value of MML's MIM Speed and implemented methods for fast-manufacturing of hot runner systems similar to (or the same as) the method of the above-captioned application, only after MML filed the above-captioned application and started using MIM Speed.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: December 22, 2004

A handwritten signature in black ink, appearing to read 'Patrick Bennett', written over a horizontal line.

Patrick Bennett
Vice President of Sales &
Marketing for Mold-Masters
Limited

Günther Heisskanaltechnik GmbH

**European Tool & Mould Making
July/August 2004 (Buyer's Guide 2004-05)**

Complete Custom Manifold Systems Deliverable in Only Two Weeks

Sourcing Feature: Hot Runner Systems & Supplies



The **Quick-Shot rapid hot runner manifold** from **Günther Heisskanaltechnik GmbH** offers tool and mould makers the advantage of a complete system that can be delivered with just two weeks lead time. The manifold is available in straight and crossover configurations. Among the benefits provided by the standardized, fully balanced system are freely selectable pitch centres (within defined limits) and optimum heat distribution.

Complete Quick-Shot systems comprise a manifold with insulating plate; a connection piece including Titan insulating ring; thrust-transmitting pieces; an adjacent thermocouple; a spacer; 5SHT/6SHT-series hot runner nozzles 50 or 60 mm long offering outstanding thermal isolation; and electrical and thermal cables with mounting fixtures.

The two- or fourfold straight manifold features a range of customized bore gauges of 68 to 440 mm, while the crossover manifold has a bore-gauge range of 50–240 mm. System drawings can be downloaded from Günther's website and directly integrated into a mould drawing.

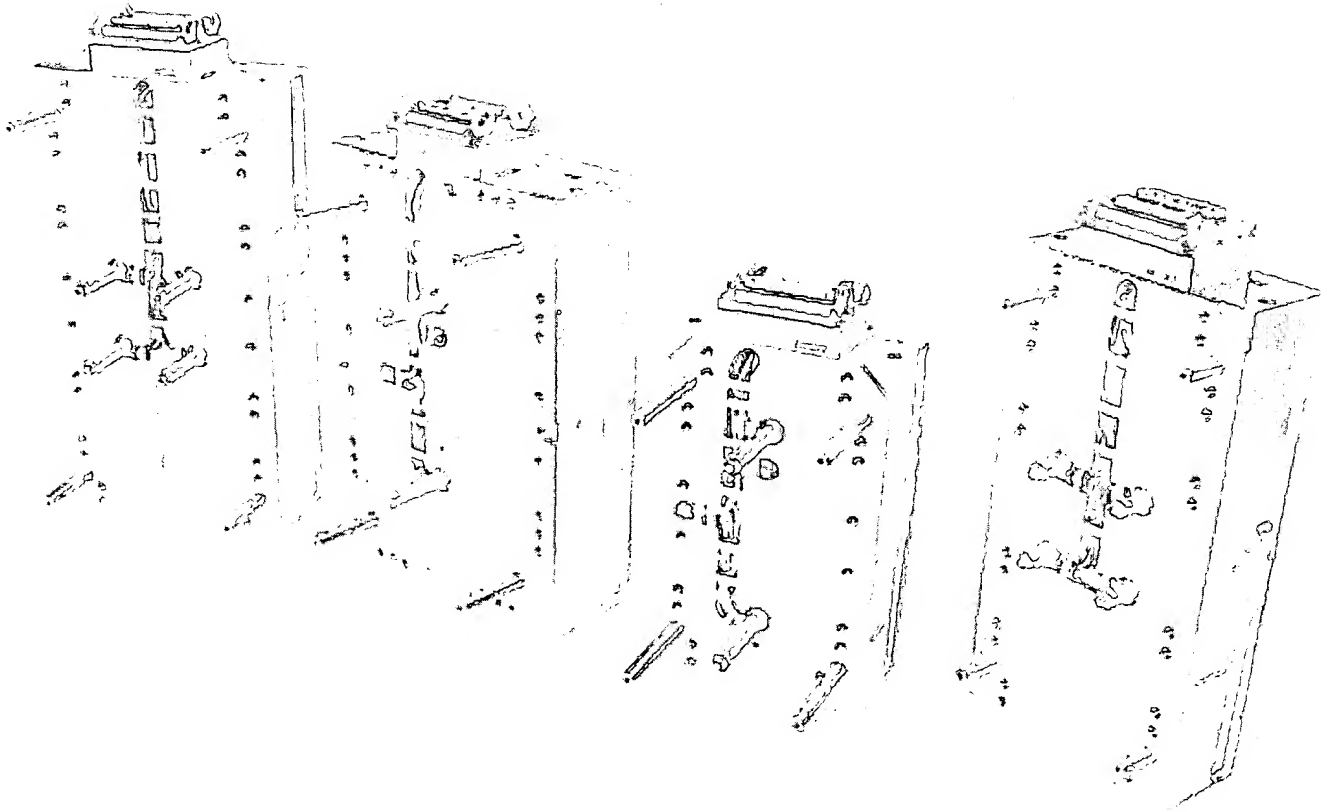
SHT-series nozzles from Günther come equipped with wear-resistant tips. They are attached to the runners with screws, and a patented split shaft ensures trouble-free processing of reinforced technical synthetics.

These manifolds are fully supported by Günther Heisskanaltechnik's worldwide customer advisory and after-sales service.

Günther Heisskanaltechnik GmbH
Frankenberg/Eder, Germany
[Request information from company](#)

Pronto Hot Runner Systems

Four-week delivery



Our Pronto line provides rapid delivery of fully configurable complete hot runners at a reduced cost. Pronto systems match industry-standard mold base plate sizes and are available as 2-, 4-, and 8-drop systems. The mold designer can select any nozzle pitch and length to fit gating and cavity spacing requirements within a defined range.

KEY FEATURES

- Fully optimized with application review and melt channel sizing analysis
- Two nozzle sizes: Ultra 500 and Ultra 750
- Three-year leakproof guarantee (for complete hot runners)
- Wide variety of gating options

Complete design information is available online at www.hotrunners.com

HUSKY

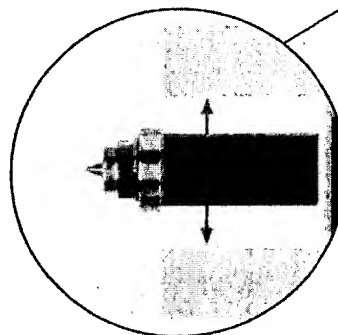
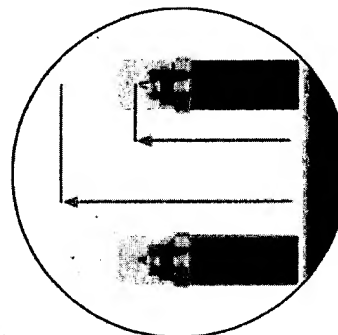
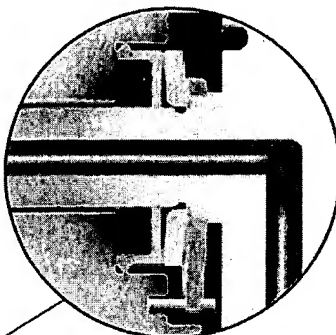
Keeping our customers in the lead

PRONTO – PERFORMANCE AND FLEXIBILITY

Pronto hot runners offer molders and mold makers a cost-effective solution for complete systems without compromising performance or limiting flexibility.

PERFORMANCE

- 1 • Three-year leakproof guarantee with UltraSeal technology
- 2 • Melt channels analyzed and optimized for every system



PRONTO PLATE SERIES

Pronto hot runners are compatible with plate standards from four mold base manufacturers.

SP SERIES

Imperial DME and National standard mold base sizes: 40 plate sizes (9 7/8" x 11 7/8" to 23 3/4" x 35 1/2")

MP SERIES

Imperial OMNI Mold Systems standard mold base sizes: 6 plate sizes (7 7/8" x 7 7/8" to 14 7/8" x 20")
OMNI and Husky in partnership offer a comprehensive molding solution for small part applications:

KP SERIES

Metric Hasco standard mold base sizes: 40 plate sizes (246 mm x 296 mm to 546 mm x 796 mm)

FP SERIES

Metric Futaba standard mold base sizes: 40 plate sizes (250 mm x 400 mm to 700 mm x 800 mm)

Pronto manifold systems are also available. Refer to www.hotrunners.com, or contact Husky for details.

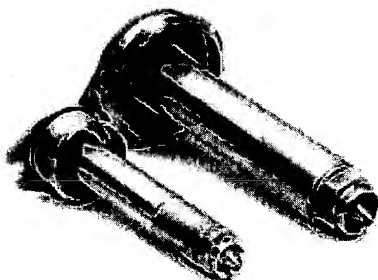


PRONTO – CONFIGURATION MADE EASY

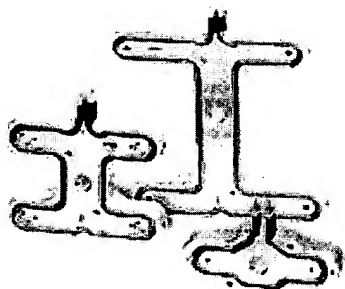
When configuring a Pronto hot runner, simply select the nozzle size, gating style, and manifold configuration required. Then, select a compatible mold frame size for plate selection. It's that easy!

Available manifold configurations are shown below.

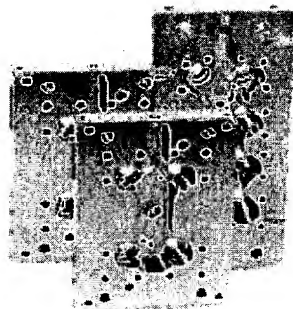
1 Nozzle Selection



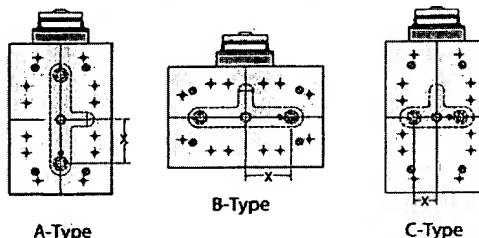
2 Manifold Selection



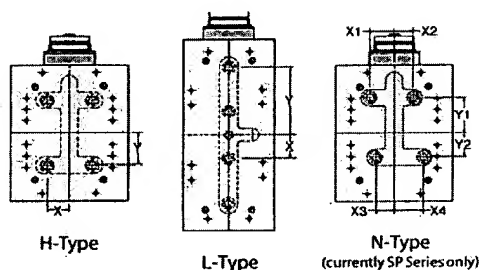
3 Plate Selection



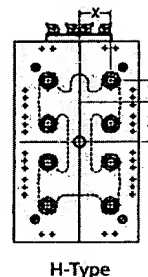
2-Drop Configurations



4-Drop Configurations



8-Drop Configuration



www.husky.ca
www.hotrunners.com

Americas & Asia
288 North Road
Milton, Vermont, USA 05468
Toll Free (800) 516 9590
Tel. (802) 859 8000
Fax (802) 859 8322

Europe
Hot Runner Mold Building
B.P. 231, L-3403 Dudelange,
Luxembourg
Tel. (352) 52 1151
Fax (352) 52 115 4458

HUSKY

Keeping our customers in the lead

Recycled paper, containing a minimum of 20% post consumer fiber.
©2003 Husky Injection Molding Systems Ltd. Printed in Canada. June 2003

Husky actively protects its technical and design innovations through a global intellectual property strategy. Husky currently has more than 900 patents and patent applications worldwide. The equipment shown in this publication may be covered by one or more of these patents.

*Husky, Pronto, and UltraSeal are trademarks owned by Husky Injection Molding Systems Ltd. Other company, product, and service names may be trademarks of their respective owners.

FLEXIBILITY

- Over 120 plate sizes available
- Variable nozzle lengths within allowable range
- Variable nozzle lengths within the same system

- Flexible nozzle spacing
- Non-symmetrical drop locations available

- Two nozzle sizes: Ultra 500 and Ultra 750
- Eight gating options available: valve gating (VG, VX) and thermal gating (HT-D, HT-T, HT-U, HT-X, HT-DC, TS)



www.hotrunners.com

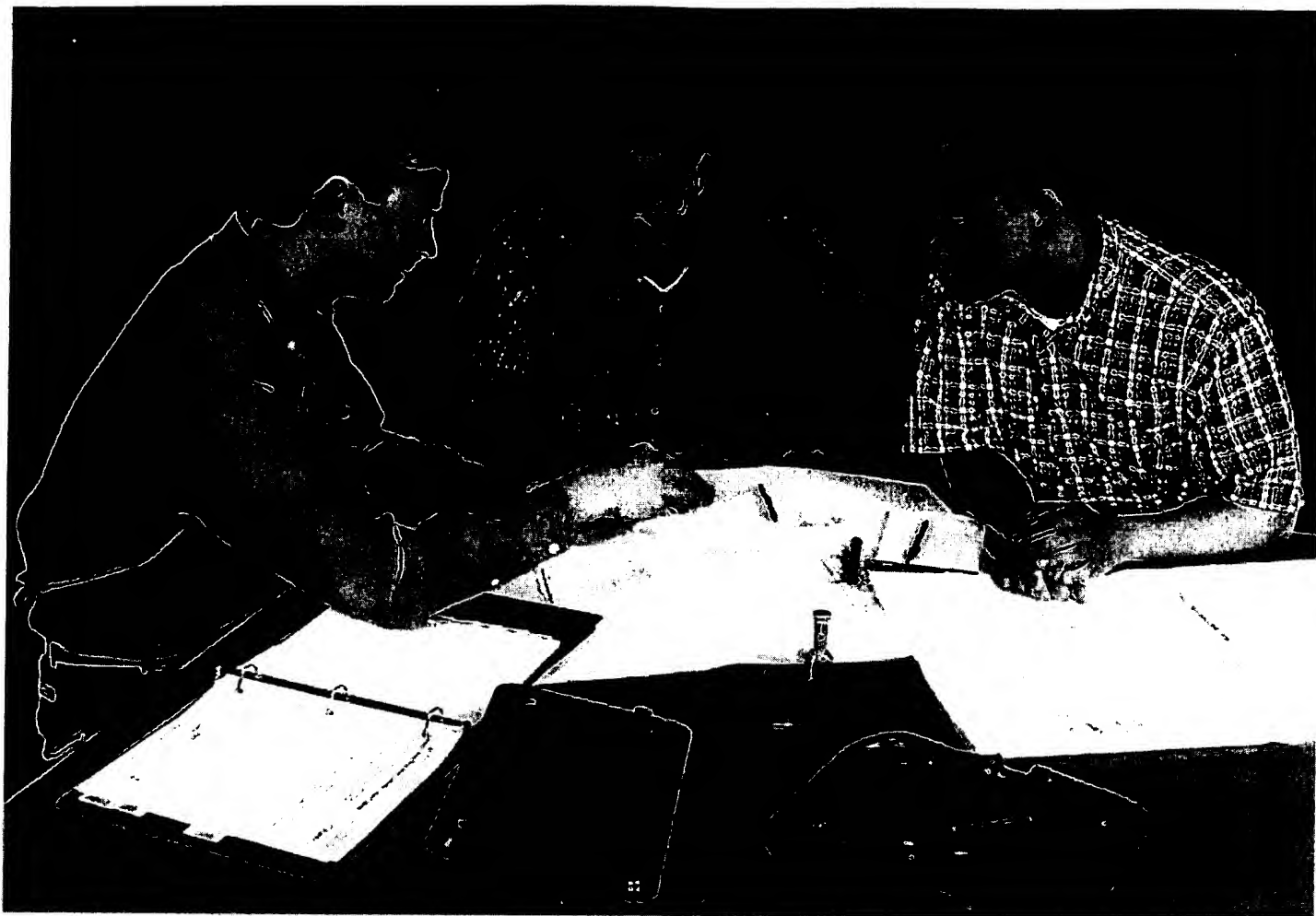
DESIGN INFORMATION AND ONLINE ORDERING

Easy to navigate, our multilingual hot runner web site offers complete Pronto hot runner design information. The Design Center section provides all the information necessary to integrate a Pronto hot runner into a mold base. Application examples, gate details for the Ultra 500 and Ultra 750 nozzles, fully dimensioned plate sizes, and nozzle selection guidelines are also available to simplify specification.

An easy-to-use configurator assists with hot runner selection, specification, and ordering. Your order is electronically submitted to one of our local project engineers, who will contact you within 24 hours to confirm delivery and price, verify the application, and perform a complete design review.



Stainless steel plates for extended life with individual plate cooling.



3 WEEK DELIVERY—TO YOUR STANDARDS

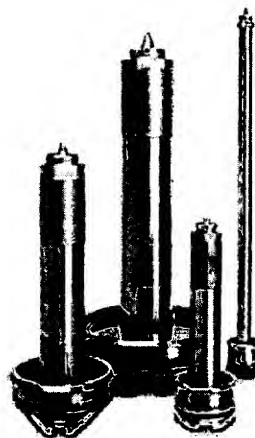
One meeting led to increased savings and faster turnaround.

"When our Husky area manager suggested we use Pronto hot runners on our highly customized systems, we thought he was dreaming. Based on our input, Husky expanded their product offering to suit our needs, and we still got delivery in three weeks.

Right from the start, the Husky team was focused on helping us succeed rather than just selling hot runners. We now get faster turnaround and significant savings."

Mr. Carey Caswell
Design Manager
Johnson Controls AG,
United States

Visit www.hotrunners.com
or call 1-800-561-9590.



HUSKY

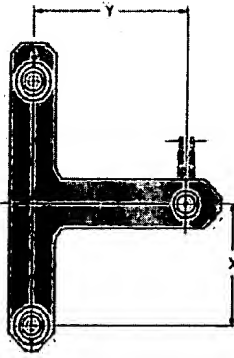
Keeping our customers in the lead

May 1, 2003

NEWS RELEASE

HUSKY HOT RUNNERS ADDS TO PRONTO LINE

Two new configurations offer increased flexibility



2T Pronto

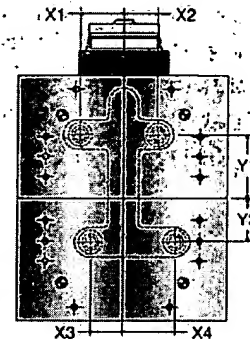
Milton, Vermont, USA – Husky Injection Molding Systems' has added two new configurations to its Pronto hot runner product line. The new designs offer molders a simple solution for non-symmetrical layouts while maintaining Pronto's quick lead times.

"A growing number of applications require non-symmetrical nozzle drop layouts for non-symmetrical part geometries," says Martin Baumann, Husky's hot runner Marketing Manager. "Non-symmetrical drop layouts also provide more efficient use of the plate area, allowing the cavities to be positioned closer together without interference. The Husky solution

is the 2T and 4N Pronto."

As the name implies, the 2T manifold assumes a T-shape where the sprue is positioned off-center from the drops. This allows for easy accommodation of secondary molding equipment operations such as in-mold decorating. The offset drop locations also provide greater flexibility when selecting gating locations.

The new 4N design improves upon Husky's 4H system by incorporating four independent X-values and two independent Y-values for drop positioning. This enables each drop to be positioned independently, thereby maximizing flexibility when choosing gate locations. This is especially helpful when molding automotive interior components that feature left and right side complements.



4N Pronto

Design automation developed specifically for the 2T and 4N allows Husky to reduce lead times and cost relative to custom hot runner designs. Each system undergoes a thorough application review that determines the optimum melt channel sizes and component materials for the required application. These new designs offer the same features found in Husky's custom hot runners, including Ultra Seal technology and a three-year leakproof guarantee on complete hot half Pronto systems.

-30-

Husky Injection Molding Systems Ltd. (www.husky.ca) is a global supplier of injection molding equipment and services to the plastic industry. With one of the broadest product lines in the industry, customers use Husky's equipment to manufacture a wide range of products in the packaging, technical and automotive industries. The company has more than 40 service and sales offices, supporting customers in over 100 countries. Husky's manufacturing campuses are located in Canada, the United States, and Luxembourg.

For further details, please contact:

Martin Baumann
Marketing Manager
Hot Runners

HUSKY INJECTION
MOLDING SYSTEMS INC.

288 North Road
Milton, Vermont 05468
U.S.A.

Tel. (802) 859-8114
Fax (802) 859-8321
Email:
mbaumann@husky.ca

PLASTICS Auxiliaries & Machinery

Recent & Noteworthy

July 2001

Tooling:

Eight-Drop Hot Runner Systems Added To 'Quick Delivery' Program

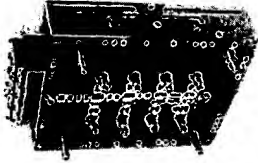
Husky has added two styles of 8-drop hot runner systems to its Pronto 'quick delivery' line (Sep '00 P4, p 47). The difference between the two versions is in the 'x' and 'y' pitch, which gives users more flexibility in arranging the drops. Pronto systems are also available in 2- and 4-drop configurations.

Moldmakers can specify the hot runner design using Husky's online Design Center at www.hotrunners.com. According to Martin Baumann, Husky's Hot Runner Marketing Manager, complete Pronto systems are available at reduced cost compared to custom systems and can be delivered in four weeks.

Pronto hot runner systems are said to allow for almost unlimited nozzle pitch, exact nozzle length specification and a selection of hot tip, valve gate or thermal sprue gating styles.

Husky Injection
Molding Systems Inc.
Milton, VT

For more information, call the company listed alphabetically in the Plastics Auxiliaries Key Contact Directory.



Home | Current Issue | Past Features | Product News | Recent/Noteworthy | Find Media Kit | Free Subscription | Talk To Us | Advertiser Contact Directory | Advertiser Hot Links | Key Contacts Directory | ACTS Product Catalog | Bulletin Board | ASAP Advertising Space Advantage Program

PLASTICS
Auxiliaries
& Machinery

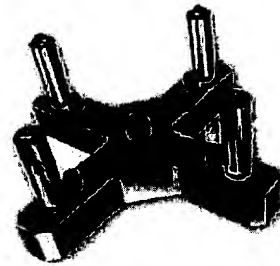
This site was created by DesignWebSite
This page was updated 07/23/01

**European Tool & Mould Making
October 2002**

Hot Runner System Ready in Two Weeks

Fakuma 2003 Focus: Hot Runner Systems

A line of standard hot runner systems from **Incoe International** that was previously limited to two-port systems now is complemented by the introduction of four-port systems. **DFS four-port hot runner systems**, like their two-port counterparts and unlike customized systems, can be supplied within two weeks.



DFS standard systems offer individual center distances of 50 to 150 mm from the manifold center. System dimensions are available on disk or via the Internet for customers to use immediately for mould design.

Delivered ready to use, DFS systems consist of a single factory-tested unit; installation is quick and safe. Systems can be supplied with finished and tested electric, hydraulic, or pneumatic connections. Shot weights up to 2800 g per injection point are possible. All common gate types are available, including hydraulic and pneumatic valve gates.

Incoe International
Roedermark, Germany

Request information from company

Keeping-Up with Tooling

Quick-Delivery Program For Hot Runners Is Upgraded— July 2004

D-M-E has broadened its quick-delivery program for Stellar hot-runner systems designed for micro-molding. The three-level program offers multi-nozzle assemblies (MNAs) with four, eight, and 16 drops, either alone or with a standard or custom nozzle plate. Tip spacing is as tight as 17 mm.

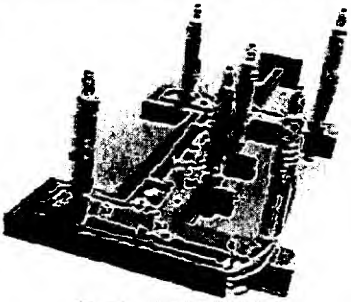
An MNA without nozzle plate can be shipped in three to five work days. An MNA with standard nozzle-plate thickness can ship in five work days. And MNAs with a custom nozzle-plate thicknesses ship in 10 working days.

D-M-E Company

29111 Stephenson Highway Madison Heights, MI 48071
Phone (248) 398-6000 Fax (248) 544-5705

Source:

<http://www.plasticstechnology.com/articles/kuw/12518.html>



Synventive to Deliver Custom Hot Runner Systems in Four Weeks

Product Focus: Hot Runner Systems

On March 1, a new program was announced by **Synventive Molding Solutions**. The company will ship its line of **KONA XP hot runner systems**—both standard and custom configurations—in four weeks. The line was introduced at NPE 2003 last June.

"This program sets a new industry standard," says Mark Moss, senior vice president of sales and marketing. "We've always recognized the importance of fast deliveries in the injection molding business, and now we'll lead the way for hot runner suppliers."

Unlike traditional fast-delivery programs that only include simple, off-the-shelf type systems, the Synventive program includes virtually every KONA XP system the company produces—from simple, straight-bar systems to the largest, most complex multi-leg systems for the automotive industry.

Synventive Molding Solutions
's-Gravendeel, Netherlands
[Request information from company](#)

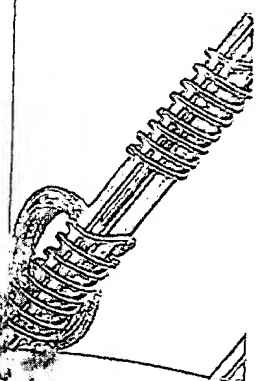
NEW

IP DEPT

4-Week

Custom Hot Runner Deliveries!

Synventive
sets New
Industry
Standard



What You Want

You want your new hot runner system, and you want it fast. And you want fast deliveries of more than just the standard "cookie-cutter", "off-the-shelf" type systems.

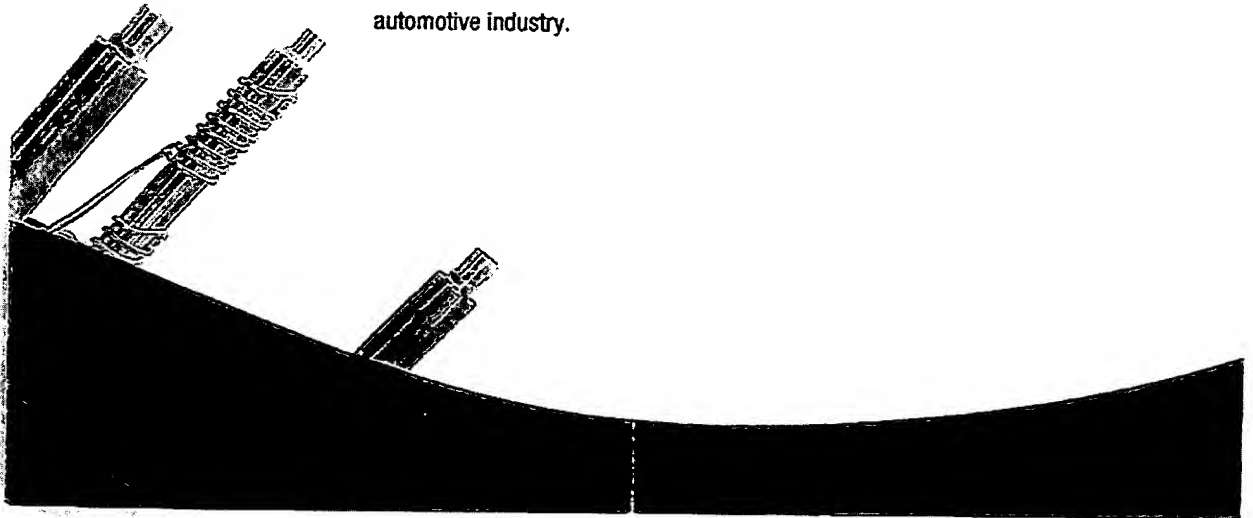
What You Get

We hear you, and we're pleased to announce our ambitious new deliveries program. Under this new program, Synventive will ship its new KONA XP hot runner systems in **4 weeks**. And, unlike traditional "fast delivery" programs that only include simple off-the-shelf type systems, the Synventive program includes customized hot runners - from straight-bar systems to the largest, most complex multi-leg systems for the automotive industry.

Are sequential valve gate systems included?

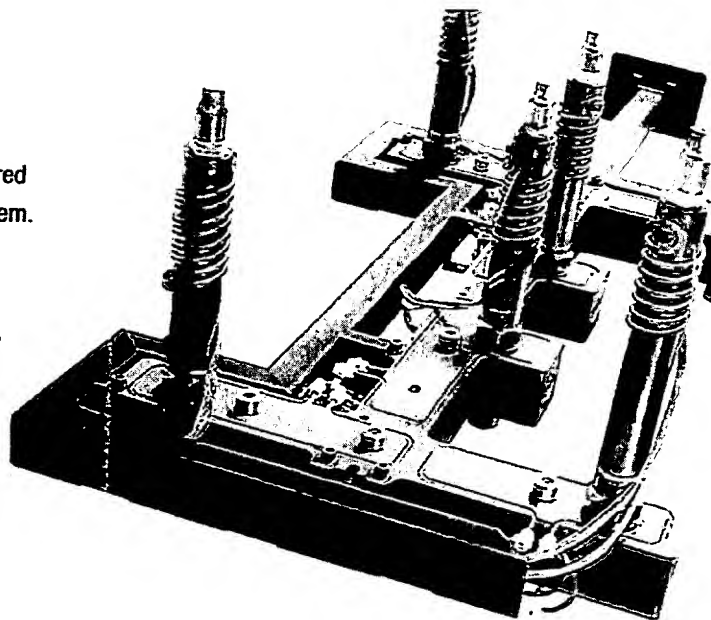
YES. Systems with Wire-Guards and connectors? YES. Any manifold shape you want? YES. About the only types of systems not included are stack molds and systems with mold plates, and even these types of specialty systems will be delivered in 6 weeks.

You won't find a better value, or faster delivery times, in the industry!



How It Works

- The clock starts once you have ordered your new Synventive hot runner system.
- With your approved information we produce your General Assembly (GA) drawing in one week (5 days or less).
- Upon your approval of the GA, Synventive will build, test and deliver your system in 3 weeks.



Custom Hot Runner Deliveries!

The Fine Print

We're so proud of this new program that we're not using fine print – even though there are certain limits to the program.


Here they are:

- the hot runner system must have 16 drops or less
- the total manifold footprint must be less than 46" (1168mm) x 78" (1981mm)
- the manifold and nozzle bore diameters must range between 5mm and 25mm, in 1mm increments
- pre-plumbed systems (with connected hydraulic and water lines), stack molds, hot halves will be delivered in 6 weeks.

KONA XP Systems

Synventive's KONA XP hot runner systems feature the best of the company's existing Heat Pipe and MultiZone technology, to create a hybrid solution that is affordable, reliable, and high performance.

With the KONA XP, you get unparalleled temperature uniformity with Synventive Heat Pipe technology, and unparalleled design flexibility and high performance with Synventive MultiZone manifold technology.




These systems can manufacture all sizes of parts, and are available with a complete line of nozzles with replaceable tips for easy maintenance and open-flow channels for quick color changes. You can choose from thermal-gated, valve-gated, sequential valve-gated or reverse gated systems, and systems can be delivered fully assembled as a hot half, partially assembled with wire guard or as a hot runner manifold.

Contact Us

Contact us today for more information on the new fast deliveries program for KONA XP hot runner systems!

Synventive Molding Solutions, 10 Centennial Drive, Peabody MA 01960, USA
Tel: 1.800.367.5662 Fax: 978.646.3600 info@synventive.com



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.